

WHAT IS CLAIMED IS:

1. A print mechanism comprising:

5 a print head assembly comprising a position detector and a marking device, said position detector comprising an imaging device for periodically forming an image of a portion of a print medium;

10 an actuator for moving said print head assembly relative to said print medium in a predetermined direction; and

15 a controller for comparing first and second images formed by said imaging device at first and second times, respectively, in a time interval in which said actuator has moved said print head assembly relative to said print medium and for determining a displacement of said print head assembly between said first and second times, said controller causing said marking device to mark said print medium at locations determined by said determined displacement while said print head assembly is moving relative to said print medium.

20 2. The print mechanism of Claim 1 wherein said actuator moves said print head assembly relative to said print medium at a speed that depends on an input signal to said actuator and wherein said input signal is varied in response to said determined displacement so as to reduce fluctuations in said speed.

25 3. The print mechanism of Claim 1 wherein said marking device is caused to mark said print medium at a location that depends on said determined displacement.

30 4. The print mechanism of Claim 1 wherein said imaging device comprises an image sensor for generating a one-dimensional image of said print medium in a direction parallel to said predetermined direction.

5. The print mechanism of Claim 1 wherein said imaging device comprises a light source for illuminating said print medium at an angle that is less than 45 degrees with respect to a surface of said print medium.

6. The print mechanism of Claim 1 wherein said marking device comprises an ink-dispensing mechanism for depositing ink droplets on said print medium.

5 7. A method for printing on a print medium, said method comprising:

causing a print head assembly comprising a position detector and a marking device, said position detector comprising an imaging device for periodically forming an image of a portion of a print medium to move across said print medium in a predetermined direction;

10 comparing first and second images formed by said position detector at first and second times, respectively, in a time interval in which said print head assembly has moved relative to said print medium and determining a displacement of said print head assembly between said first and second times; and

15 causing said marking device to mark said print medium at locations determined by said determined displacement while said print head assembly is moving relative to said print medium.

20 8. The method of Claim 7 wherein said print head assembly moves relative to said print medium at a speed that depends on an input signal to an actuator and wherein said input signal is varied in response to said determined displacement so as to reduce fluctuations in said speed.

25 9. The method of Claim 7 wherein said marking device is caused to mark said print medium at a location that depends on said determined displacement.

10. The method of Claim 7 wherein said first and second images are one-dimensional images of said print medium generated in a direction parallel to said predetermined direction.

30 11. The method of Claim 7 wherein said print medium is illuminated by a light source that generates light at an angle that is less than 45 degrees with respect to a surface of said print medium.

12. The method of Claim 7 wherein said marking device deposits ink droplets on said print medium.